To: Willis-Hilbrich, Sara[Willis-Hilbrich.Sara@epa.gov]
From: Larimer, Lisa
Sent: Wed 2/11/2015 9:07:10 PM
Subject: FW: Materials for Tomorrow's conference Call: Billings MT Case Study
CityofBillingsEPAsummary.pdf

Another meeting invite w/ MT

----- Forwarded by Lisa Larimer/DC/USEPA/US on 02/11/2015 04:02 PM -----

From: Tina Laidlaw/MO/R8/USEPA/US
To: Amanda.McInnis@hdrinc.com, Dave Moon/R8/USEPA/US@EPA, Gary Russo/DC/USEPA/US@EPA, Janita Aguirre/DC/USEPA/US@EPA, Jim Carleton/DC/USEPA/US@EPA, Lisa Larimer/DC/USEPA/US@EPA, Manjali Vlcan/DC/USEPA/US@EPA, MumfordD@ci.billings.mt.us, Phil Zahreddine/DC/USEPA/US@EPA, Tonya Fish/R8/USEPA/US@EPA, "Blend, Jeff" <jblend@mt.gov>,
Cc: gemathieus@mt.gov, Johanna Miller/R8/USEPA/US@EPA, msuplee@mt.gov, Ron Steg/MO/R8/USEPA/US@EPA, Rosemary Rowe/MO/R8/USEPA/US@EPA
Date: 07/05/2011 04:19 PM
Subject: Materials for Tomorrow's conference Call: Billings MT Case Study

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Attached is a fact sheet for tomorrow's conference call along with a draft agenda. Look forward to talking with folks tomorrow!

Tina

Call-in number: [redacted]

Purpose: The purpose of tomorrow's conference call is for EPA staff to learn about the City of Billings efforts to address Montana's numeric nutrient criteria. The City of Billings is interested in hearing EPA's opinion on what the interim effluent limits should be for Billings after 2016. The call is intended as a listening session. We can follow-up with the City with any suggestions we have after tomorrow's discussion.

Draft Agenda:

- Introduction / Overview
- Background on the City's current wastewater technology, integrated water management plan, and the proposed criteria for the Yellowstone
- Economic analysis for various treatment options
- Alternatives to discharging ("Getting out of the river")
- Planning for the future - what should Billings be building to achieve?
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(See attached file: CityofBillingsEPAsummary.pdf)

Tina Laidlaw
USEPA Montana Office
10 West 15th Street, Suite 3200
Helena, MT 59626
406-457-5016

CITY OF BILLINGS, MONTANA NUTRIENT CRITERIA IMPLEMENTATION SUMMARY SHEET

Population: ~100,000 people

WWTP data:

- Capacity: 26 mgd (40 cfs)
- Current Nutrient Performance: 20 mg/L TN, 3 mg/L TP (Designed for BOD removal only)
- Permit Renewal in 2012.

Yellowstone River data:

- Seasonal Low Flow of the Yellowstone at the Point of Discharge: 2,000 cfs
- Upstream Yellowstone River Nutrient Concentrations: -0.025 mg/L TP; 0.4 mg/L TN
- Yellowstone River Standards have not yet be created by MDEQ
- Standards could be close to the upstream values based on downstream modeling.
- If standards are close to upstream values, a variance would be needed under Senate Bill 367.
- As currently drafted, the City of Billings could be granted a variance if they improved plant performance to 10 mg/L TN and 1 mg/L TP.
- Variance would be granted in 2017, after the current legislation sunsets (2016).
- It is unclear what the variance rules would be in 2017.

Cost for Plant Improvements:

- Improvements to get to 10 mg/L TN and 1 mg/L TP are about $30 million, other plant improvements require an additional $30M investment. The City Council recently approved the expenditure of these funds.
- Additional O&M due to nutrient control is about $1M per year in both power and chemical costs.
- Current rates are $18/month (about 0.5% of MHI).
- The City can fund improvements to 10 mg/L TN and 1 mg/L with nominal future rate increases.
- Using SocioEconomic Indicators, City of Billings would be at more than 2% of MHI before receiving an economic variance (>$90/month).

Integrated Water Planning

- The City of Billings is being proactive and trying to find other locations for effluent discharge through a stakeholder-based integrated water planning process.
- Candidates include: alfalfa fields, irrigation ditch, and effluent reuse.

Table 1-Montana Cities SocioEconomic Scores Calculation

Table 2-1 Secondary Indicators for the Municipality (or study area)

	Indicator	Secondary Indicators: Weak*	Mid-Range**	Strong***	Score		City of Missoula	City of Great Falls	City of Billings	City of Helena	City of Bozeman
SocioEconomic Indicators	Poverty Rate	More than 22%	10-22%	Less than 10%	2	*Update this criteria every few years (or after a census)*	1	2	3	2	2
	Low to Medium Income Percentage (LMI)	More than 62%	33-62%	Less than 33%	2	*Update this criteria every few years (or after a census)*	2	2	3	2	2
	Unemployment	More than 1% above State Average (>7.2%)	State Average 2009----6.2%	More than 1% below State Average (<5.2%)	2	*Update this criteria every few years (or after a census)*	1	2	3	3	2
	Median Household Income	More than 10% below State Median	State Median--$43,948 (2008)	More than 10% above State Median	1	*Update this criteria every few years (or after a census)*	1	2	3	2	2
	Property Tax, fees and revenues divided by MHI and indexed by population	More than 3.5	3.5 to 2	Less than 2	3	*Update this criteria every few years (or after a census)*	2	2	2	2	2
				SUM:	10	*Sum:*	7	10	14	11	10
	Equal to the Sum divided by the number of Indicators given a score			*AVERAGE:*	2.00	*Average:*	1.4	2	2.8	2.2	2
%MHI						%MHI	1.0%	1.5%	2.3%	1.8%	1.5%
	http://www.epa.gov/waterscience/standards/econworkbook/table21.html					MHI	$ 37,291	$ 42,056	$ 48,470	$ 44,946	$ 44,776
	Note: If the applicant is not able to develop one or more of the five indicators, they must provide an explanation as to why the indicator is not appropriate or not available.					Current Rate $/mo	11.5	17.07	14.29	17.82	23.47
						Rate to %MHI Target	$ 31.08	$ 52.57	$ 90.88	$ 65.55	$ 55.97

* Weak is a score of 1 point
** Mid-Range is a score of 2 points
*** Strong is a score of 3 points

Table 2-Preliminary Capital Cost Estimates for Nutrient Related Improvements in Billings, Montana

Level of Nutrient Removal	Estimated Capital Cost
10 mg/L TN, 1 mg/L TP	$30M
5 mg/L TN, 0.1 mg/L TP	$60M
3 mg/L TN, 0.03 mg/L TP	$80M
Reverse Osmosis	$300M